SOLAR PV PERMIT CHECKLIST

This handout serves *only* as a guide and does not contain all of the requirements of Boone County codes.

Drawings Must Include:

- ❑ Date
- ❑ Property Owner (Name, Address, Contact Phone Number, email address)
- ❑ Installation Company (Name of Company and Contact Person, Address, Contact Phone Number, email address)
- ❑ Drawing Number and Revision Number
- ❑ Drawing Designer

Attachment 1. Electrical Drawing Must Show:

- ❑ Size of electrical service and size of main breaker
- ❑ If interconnection point is a subpanel, size of subpanel
- ❑ Nominal Power of Solar System
  - DC capacity: Value of all panels (WATTS)
  - AC capacity: Total AC capacity of inverters (WATTS)
- ❑ Batteries (if present): type, quantity, nominal voltage, capacity KWh
- ❑ Interconnection method
  - Size of overcurrent protection
- ❑ Number, type, and electrical configuration of solar panels
- ❑ Number , type of inverters and location of inverters
- ❑ Wiring methods
  - Wire type(s), size
  - Conduit type(s), size
- ❑ Solar production meter (if appropriate)
- ❑ Electrical current contributions from all PV sources
- ❑ Electrical grounding details: Wire type, size
- ❑ Solar distributed generation disconnect for electrical utility
- ❑ If utility meter is not within sight of distributed generation disconnect proper signage will need to be installed at equipment location to denote the location

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Attachment 2. Site Plan Must Show:

- ❑ Location of solar panels
- ❑ Location of inverters and major equipment
- ❑ Location of roof obstructions (vents, chimneys, etc.)
- ❑ Location of ground mount units and mount type
- ❑ Location of main breaker panel
- ❑ Location of utility meter
- ❑ Location of AC disconnect
- ❑ Location of batteries and/or charge controllers (if applicable)
- ❑ Location of solar metering and utility sub meter (if applicable)
- ❑ Planned conduit path (encouraged, not required)
- ❑ Gross dimensions of structure (if applicable)
- ❑ Approximate layout of building, and other structures (if applicable)
- ❑ Trenching details: location, depth and length of trench (if applicable)
- ❑ Property lines, zoning, and setback considerations (if applicable)

Attachment 3. Structural Analysis (for roof mounted systems)

- ❑ Proof of structural review performed by a registered design professional (e.g. Professional Engineer)
- ❑ Approximate age, type of material, and expected remaining life span of roof (must have 10+ years of usable remaining life).

Attachment 4. Solar PV Module Specification Sheets

(Provide PDF from manufacturer)

Attachment 5. Inverter Specification Sheets

(Provide PDF from manufacturer)

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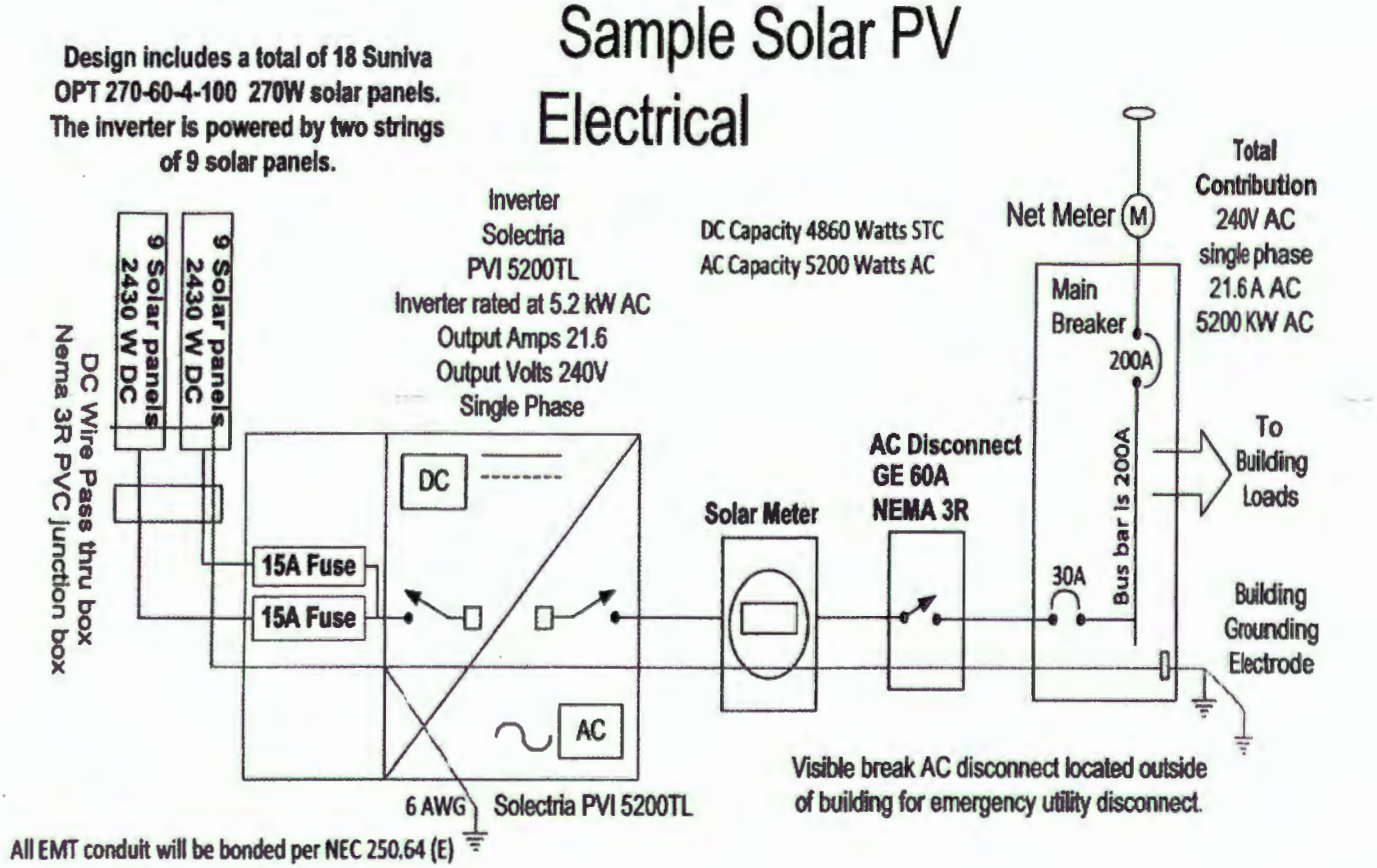
ATTACHMENT 1.

Example of Electrical Drawing.



AC Wire Type
THWN-2 6 AWG 90°wire
¾ inch EMT Conduit

NOTE: Grounding Conductor will be 6 AWG bare or Green and connect to building grounding electrode.

DC Wire Types
PV Wire – 10 AWG 90° C on roof
In conduit THWN-2 10 AWG 90° wire
Rails grounded with bare 8 AWG
Grounding Electrode Conductor 6 AWG
Bare or green
¾ inch EMT Conduit

Generic Solar **James Smith** **573-555-5555** **1234 Green CT** **Town, MO**	John Doe 5678 Elm St Anytown, MO 65295 **Drawing: 01** **Revision: 04 01/15/00** **Drawn By : Peter Solar**

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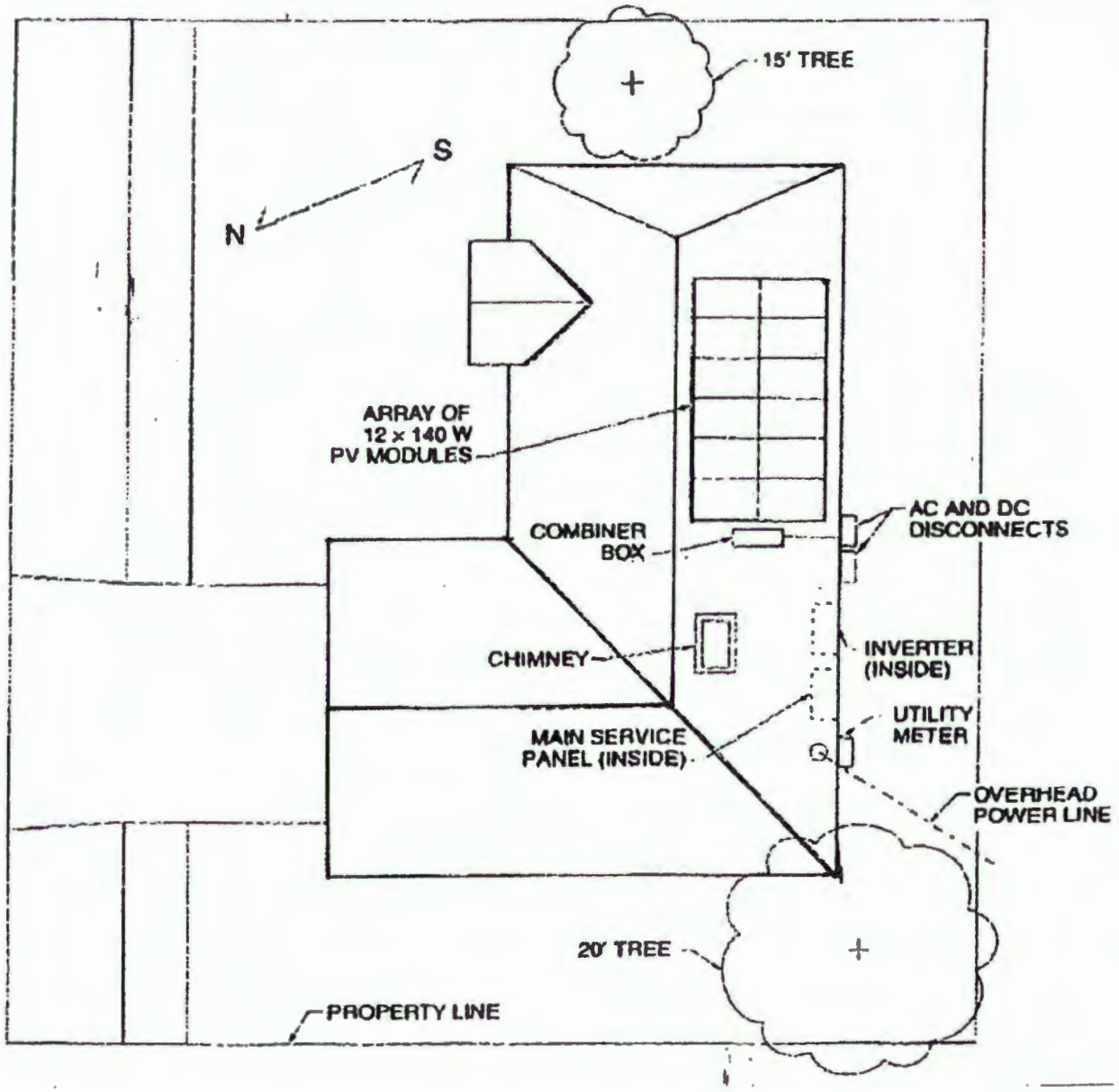
Attachment 2.

Example of site plan.



Attachment 3.

Example of **Structural Analysis.**

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Courtesy Prince William County, VA

Figure - ROOF STRUCTURE DETAIL

ROOF MEASURMENTS

L = SPAN	
H = HEIGHT	
S = SLOPE	

NOTES

1. All details not to scale.
2. To be used in conjunction with manufacturer's installation instructions.
3. Design Ground Snow Load 30 PSF.
4. See IRC for span tables.
5. Blocking shall be properly secured per industry standards.
6. Pre-drilling of structural members is required for lag bolts.
7. Caulk all penetrations through the roof membrane.

Figure - ATTACHMENT LOCATION

Figure - ATTACHMENT DETAIL

PROJECT INFORMATION

Site Address _____

_____

Prepared by _____

Date _____

Phone _____

Email _____

ROOF SYSTEM INFORMATION

1. Roof construction: ☐ Rafters ☐ Trusses
   ☐ Other _____
2. Describe site built rafter or truss system.
   a. Rafter Size _____ x _____ inches
   b. Rafter Spacing _____ inches
   c. Maximum unsupported span _____ feet, _____ inches
   d. Are the rafters over-spanned? (Use the IRC span tables)

MODULE ATTACHMENT INFORMATION

a. Mounting System Manufacturer _____
b. Product Name and Model Number _____
c. Total Dead Weight of PV Modules and Rails _____ lbs
d. Total Number of Attachment Points _____
e. Weight per Attachment Point (c ÷ d) _____ lbs
f. Total Surface Area of PV Modules _____ ft2
g. Distributed Weight of PV Module on Roof (c ÷ f) _____ lbs/ft2